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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/814,933	03/30/2004	Nicholas I. Buchan		7929

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12/04/2009

EXAMINER
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JOHNSON, CONNIE P

ART UNIT	PAPER NUMBER
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1795

MAIL DATE	DELIVERY MODE
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12/04/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/814,933	<b>Applicant(s)</b> BUCHAN ET AL.	
	<b>Examiner</b> CONNIE P. JOHNSON	<b>Art Unit</b> 1795	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 14 July 2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-3, 11, 12 and 14-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 15-23 is/are allowed.
- 6) ☒ Claim(s) 1-3, 11, 12 and 14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                    | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)         | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                          |

**DETAILED ACTION**

***Response to Amendment***

1. The remarks and amendment filed 7/14/2009 have been entered and fully considered.
2. Claims 1-3, 11-12 and 14-23 are presented.
3. Claims 15-17 are amended.
4. The 112, 1<sup>st</sup> paragraph rejection is withdrawn.
5. The objection to the drawings is withdrawn.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-3, 11-12 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nuzzo et al., U.S. Patent Publication No. 2005/0199584 A1.

Nuzzo teaches a composition for microfabrication comprising a substrate, silicon oxide layer (stiffener layer), silicon-containing elastomer layer (cushion layer), top silicon-containing elastomer layer (transfer layer) and a photoresist layer (page 4, [0048]). The substrate comprises a silicon wafer (page 7, [0066]).

The top silicon-containing elastomer layer comprises polydimethylsiloxe (PDMS) (page 3, [0036]) and is representative of the cushion layer with a thickness of 10nm-100µm (page 10, [claim 51]).

The top silicon-containing elastomer layer is representative of a transfer layer and has a thickness of 500nm-100µm (page 7, [0064]).

Silicon oxide layers are applied on the silicon wafer substrates with a thickness of 2500Å (page 7, [0067]). The silicon oxide layer is representative of a stiffener layer.

Nuzzo teaches the silicon-containing elastomer layers may comprise silicon-modified natural rubber as an elastomeric material (page 3, [0036]). Nuzzo does not specifically teach the silicon-modified natural rubber as the elastomeric material over the other silicon-containing material. However, it would have been obvious to one of ordinary skill in the art to use silicon-modified natural rubber as the silicon-containing elastomer layer because Nuzzo teaches any of the silicon-containing elastomers provide flexible support to the top silicon-containing elastomer layer.

8. Claims 15-23 contain allowable subject matter. The prior art does not teach a cover-tape holding a photoresist transfer pad wherein the cover-tape is larger in area than the photoresist transfer pad and extending beyond first and second edges of the transfer pad. The prior art also does not teach at least two photoresist transfer pads held by the cover-tape.

### ***Response to Arguments***

9. Applicant's arguments filed 7/14/2009 have been fully considered but they are not persuasive.

10. Applicant argues that Nuzzo does not teach applying the photoresist to workpieces as claimed wherein a transfer layer pf polydimethylsiloxane with a

transferable coating of photoresist on an outer surface of the transfer layer with the transferable coating of photoresist is transferable through physical contact.

The recitation in claim 1, “for applying photoresist to a surface of a workpiece” is intended use and does not add positive recitation to the claims. Nuzzo teaches a a substrate, silicon oxide layer (stiffener layer), silicon-containing elastomer layer (cushion layer), top silicon-containing elastomer layer (transfer layer) and a photoresist layer (page 4, [0048]). The substrate comprises a silicon wafer (page 7, [0066]). The top silicon-containing elastomer layer comprises polydimethylsiloxe (PDMS) (page 3, [0036]) and is representative of the cushion layer with a thickness of 10nm-100µm (page 10, [claim 51]). Applicant claims a PDMS layer with a photoresist on the outer layer of the PDMS and a cushion layer consisting of rubber under the PDMS layer providing a flexible support. Therefore, Nuzzo meets the limitations of the claim 1.

11. Applicant argues that the photoresist of Nuzzo is not transferrable from a PDMS transfer layer but rather used as a degradable adhesive.

The photoresist has a silicon-containing elastomer layer containing PDMS, that is capable of transferring the photoresist to a workpiece.

12. Applicant argues that Nuzzo does teach using the PDMS as a transfer layer, but does not teach the PDMS as a transfer pad for applying/transferring photoresist to a workpiece. Applicant further argues that Nuzzo does not teach any figures in the drawings of the claimed invention.

The recitation in claim 1, “for applying photoresist to a surface of a workpiece” is intended use and does not add positive recitation to the claim.

***Conclusion***

13. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CONNIE P. JOHNSON whose telephone number is (571)272-7758. The examiner can normally be reached on 7:30am-4:00pm Monday thru Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia Kelly can be reached on 571-272-1526. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Connie P. Johnson/  
Examiner, Art Unit 1795

/Cynthia H Kelly/

Supervisory Patent Examiner, Art Unit 1752